Urban Inputs in Anthropogenic Background Guidance and Other Documents

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Urban Inputs Text

Role of Background in the CERCLA Cleanup Program (US EPA 2002)

> Definition of Anthropogenic Background – natural and human-made substances present in the environment as a result of human activities (not specifically related to the CERCLA release in question)

Frequently Asked Questions About the Development and Use of Background Concentrations at Superfund Sites: Part One, General Concepts (US EPA 2018)

> Importantly, the definition of anthropogenic background is not restricted to a specific type of anthropogenic source. *Risk Assessment Guidance for Superfund, Part A* (RAGS A) explicitly describes examples of both localized and ubiquitous in terms of anthropogenic background: "Localized anthropogenic background is often caused by a point source such as a nearby factory. Ubiquitous anthropogenic background is often from nonpoint sources such as automobiles" (US EPA, 1989). Similarly, the definition of anthropogenic background EPA presents in *Role of Background Guidance* includes all contaminants present in the environment due to human activities but not attributable to a CERCLA release, which would include both diffuse and point sources (US EPA, 2002).

Guide for Determination of Representative Sediment Background Concentrations (ASTM 2020)

> The largest contribution of contamination at sediment sites is typically attributed to site releases and/or activities. However, contamination can also result from natural and ongoing anthropogenic sources not related to site releases and/or activities. Discharges from combined sewer overflows (CSOs), industrial outfalls, surface runoff, and/or storm sewer systems (municipal and private) are examples of ongoing anthropogenic sources that may be unrelated to site releases and/or activities.
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> The off-site contamination not associated with site releases and/or activities is considered a component of representative background concentrations and will continue to be a source of contamination to the site, unless all transport pathways are eliminated. A primary objective of determining representative background concentrations is to account for any background chemical input (both natural and anthropogenic) that is expected to continue migrating onto the site. It is recognized that one of the important principles for management of contaminated sediment sites is the control of sources of contamination, to the greatest extent practicable, prior to the initiation of corrective actions at the subject site (for example, see (US EPA 2002, US EPA 2005)). However, it is rarely practicable to control all background sources.

White Paper: Important Considerations in the Derivation of Representative Background Concentrations for the Evaluation of Sediment Sites (Sediment Management Work Group 2018)

> The type and intensity of land use surrounding selected background reference areas should be as similar as possible to that observed at the site, to account for chemical input that is associated with urbanization. This practice will ensure that anthropogenic background concentrations reflect the level of contamination that is generally associated with land use in the vicinity of the site, absent contributions from the site itself. This practice will help facilitate the derivation of representative background concentrations for determining achievable cleanup goals.

Guidance for Environmental Background Analysis Volume II: Sediment (US DON 2003)

> Watersheds often contain many nonpoint sources that contribute a wide range of anthropogenic background chemicals to sediment basins (e.g., in runoff from agricultural lands, highways, urban areas, and industrial areas).

References

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